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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,922	12/12/2006	Yoshito Ando	Q97125	5290
23373 7590 02/12/2008 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037				
EXAMINER				
REDDY, KARUNA P				
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1796				
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02/12/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/594,922

Applicant(s)

ANDO ET AL.

Examiner

KARUNA P. REDDY

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☒ Claim(s) 1 and 5 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/55/08)
Paper No(s)/Mail Date 9/29/2006
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

DETAILED ACTION

1. Preliminary amendment filed on 9/29/2006 is made of record. Claims 1-10 are currently pending in the application.

Double Patenting

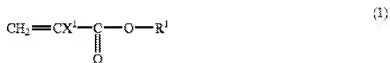
2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a

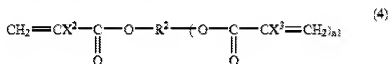
nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-10 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-2 and 4-5 of copending Application No. 11/578, 054. Although the conflicting claims are not identical, they are not patentably distinct from each other because both are directed to a photofunctional optical material comprising fluorine-containing polymer (A) and a rare earth metal compound. The fluorine containing polymer in the photofunctional layer comprises: structural units represented by



wherein X^1 is H, F, Cl, CH_3 or CF_3 ; R^1 is selected from monovalent hydrocarbon groups which have 1 to 50 carbon atoms and may have ether bond and monovalent fluorine-containing hydrocarbon groups which have 1 to 50 carbon atoms and may have ether bond, provided that at least either X^1 or R^1 contains fluorine atom, and a structural unit derived from at least one selected from polyfunctional acrylates (a1-2) represented by the formula (4):



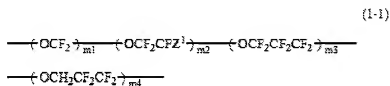
wherein X^2 and X^3 are the same or different and each is H, F, Cl, CH_3 or CF_3 ; $n1$ is an integer of 1 to 6; R^2 is a $(n1+1)$ -valent organic group having 1 to 50 carbon atoms.

Applicant's attention is drawn to MPEP 804 where it is disclosed that those portions of the specification which provide support for the patent claims may also be examined and considered when addressing the issue of whether a claim in an application defines an obvious variation of an invention claimed in the patent. (underlining added by examiner for emphasis) *In re Vogel*, 422 F.2d 438, 164 USPQ 619,622 (CCPA 1970). Consistent with the above underlined

portion of the MPEP citation, attention is drawn to

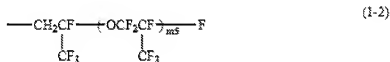
(iii) Fluorine-Containing Alkyl Group having Ether Bond

[0063] There are fluorine-containing alkyl groups having a moiety of fluorine-containing alkylene ether structure, concretely fluorine-containing alkyl groups having a structure represented by the formula (1-1):



wherein Z^1 is F or CF_3 ; $m1$, $m2$, $m3$ and $m4$ are 0 or integers of 1 to 10 and $m1+m2+m3+m4$ is an integer of 1 to 10.

[0065] Examples of the side chain portion R^1 having the moiety of the formula (1-1) are:



wherein $m5$ is an integer of 1 to 5,

The fluorine containing acrylate polymer to be used for the photofunctional laminated article is prepared by polymerizing the fluorine containing acrylate and the polyfunctional acrylate in amounts of from 20 to 99.99% by mole and from 0.1 to 80% by mole respectively (paragraph 0169).

The copending application differs with respect to the use of photofunctional material comprising fluorine-containing polymer, as a layer, in a laminated article.

However, photofunctional optical materials of present claims are generic to both laminated and non-laminated photofunctional optical materials. Therefore, it would have been obvious to use the composition in either laminated or non-laminated photofunctional optical materials.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

3. Claims 1-10 directed to an invention not patentably distinct from claims 1-2 and 4-5 of commonly assigned 11/578,054. Specifically, see the discussion set forth in paragraph 2 above.

The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP Chapter 2300). Commonly assigned 11/578,054, discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(e), (f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee can, under 35 U.S.C. 103(c) and 37 CFR 1.78(c), either show that the conflicting inventions were commonly owned at the

time the invention in this application was made, or name the prior inventor of the conflicting subject matter.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications pending on or after December 10, 2004.

4. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being obvious over Ando et al (US 2007/0218289 A1).

Specifically, see the discussion set forth in paragraph 2 above which is incorporated here by reference.

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application

is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(I)(1) and § 706.02(I)(2).

Claim Objections

5. Claims 1 and 5 are objected to because of the following informalities: Claims 1 and 5 recite "at least one selected from monovalent hydrocarbon ... and a monovalent fluorine", and "at least one moiety selected from moieties of aromatic and moieties of aliphatic..." respectively. Proper Markush grouping is listed either as "selected from A, B, C or D" or alternatively "selected from the group consisting of A, B, C and D". See MPEP 2173.05(h).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

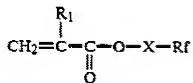
8. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto et al (US 4, 786, 658) in view of Hasegawa et al (JP 2000-063682).

Hashimoto et al discloses resin composition comprising a fluorine containing polymer composed of (A) and at least one of (B) and (C), (A) a fluorine-containing methacrylate, (B) an α , β -ethylenically unsaturated dicarboxylic acid ester and (C) a mono(meth)acrylate and having a fluorine atom content of at least 30% by weight, (II) a fluorine containing (meth)acrylate, (III) a mono(meth)acrylate and (IV) a polyfunctional monomer containing at least two (meth)acryloyl groups in the molecule. Optical fibers are produced by coating the above composition on a core material and irradiating active energy rays onto the coating to form a cured cladding of the composition (abstract).

The fluorine-containing (meth)acrylate (A) as a component of the fluorine-containing polymer (I) and the fluorine-containing (meth)acrylate (II) as a component of this invention results from bonding of a perfluoroalkyl group or partially fluorinated aliphatic group having 1 to 20 carbon atoms to a

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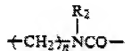
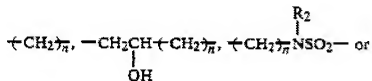
(meth)acryloyl group via divalent group. Examples include compounds represented by the general formula -



wherein R_f represents a perfluoroalkyl group or partially fluorinated aliphatic group having 1 to 20 carbon atoms optionally containing an oxygen atom in the main chain for example

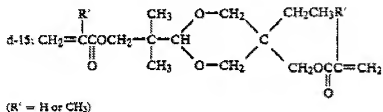


R₁ is H, CH₃, Cl or F, X is a divalent bridging group such as



in which n is an integer of 1 to 10 (column 4, lines 16-51).

The polyfunctional monomer(IV) having at least two (meth)acryloyl groups in the molecule result from bonding at least two (meth)acrylic acid moieties to a dihydric or higher alcohol by an ester linkage. It is an essential component of the resin composition of this invention in order to impart flexibility and dynamic toughness to the cured resin. Specific examples include



and ethylene glycol di(meth)acrylate (column 10, lines 18-50).

The proportions of fluorine-containing polymer (I), the fluorine containing (meth)acrylate (II), the mono(meth)acrylate (III) and the polyfunctional monomer (IV) in the resin composition may be selected according to the desired viscosity and refractive index. The preferred weight ratios are –

$$\begin{aligned} \text{(II): (IV)} &= 1:1000 \text{ to } 95:5, \\ \text{(II): (III) + (IV)} &= 50:50 \text{ to } 1000:1, \\ \text{(I): (II) + (III) + (IV)} &= 1:99 \text{ to } 10000:1, \\ \text{and the more preferred weight ratios are} \\ \text{(III): (IV)} &= 1:1000 \text{ to } 5:1, \\ \text{(II): (III) + (IV)} &= 50:50 \text{ to } 100:1, \\ \text{(I): (II) + (III) + (IV)} &= 1:9 \text{ to } 9:1. \end{aligned}$$

and read on mole% of monomers in the present claims.

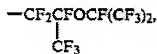
The resin composition of this invention may, as required contain other additives (V) and a photopolymerization initiator (VI) in addition to the fluorine containing polymer (I), the fluorine containing (meth)acrylate (II), the mono(meth)acrylate (III) and a polyfunctional monomer (IV) as essential

components (column 12, lines 48-53). It is noted that, fluorine containing (meth)acrylate monomer and polyfunctional monomer will polymerize upon curing in the presence of photopolymerization initiator.

Hashimoto et al is silent with respect to rare earth metal compound / complex; and differs with respect to fluorine containing alkyl group having an ether bond.

However, Hasegawa et al teach incorporation of rare earth complex into a polymer matrix to improve the luminescence of resin composition. The composition comprises 0.001-20 wt% rare earth complex and 99.99-80 wt% polymer (abstract). Therefore, it would have been obvious to add the rare earth complex to the resin composition of Hashimoto et al, for above mentioned advantages.

With respect to the fluorine containing alkyl group having an ether bond, Hashimoto et al teach acrylates wherein the fluorinated aliphatic group has 1 to 20 carbon atoms, optionally containing an oxygen atom in the main chain which is exemplified by



Therefore, it would have been obvious to choose fluorine containing alkyl group having an oxygen atom because Hashimoto contemplates monomers with fluorine containing alkyl group having 1-20 carbon atoms with an oxygen atom in the main chain and one of ordinary skill in the art would expect a fluorine

containing monomer, which is an isomer or homologue of the above mentioned structure to work, motivated by expectation of success.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KARUNA P. REDDY whose telephone number is (571)272-6566.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Karuna P Reddy
Examiner
Art Unit 1796

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